

REMARKS

Claims 1-47 have been examined, with claims 1, 13-16, 19, 20, 24, 27, 31, and 42-45 rejected, claims 2-12, 17, 18, 21, 22, 25, 26, 28-30, 32-41, 46, and 47 objected to, and claim 23 allowed.

Applicant thanks the Examiner for the indication of allowable subject matter in claims 2-12, 17, 18, 21-23, 25, 26, 28-30, 32-41, 46, and 47.

Turning to the prior art rejection, claims 1, 13-16, 19, 20, 24, 27, 31, and 42-45 have been rejected under 35 USC 103(a) as being unpatentable over Liu (U.S. Patent No. 7,032, 223) in view of Cheng et al. (U.S. Patent No. 6,405,309; hereinafter "Cheng"). Applicant respectfully traverses this rejection for the reasons set forth below.

The claims are directed to a wireless communication method and system for hosting a plurality of processes, each process in the plurality of processes executed in accordance with a communication protocol, the communication protocol including a set of functions. The system has a plurality of application specific instruction set processors (ASISPs) and a scheduler or centralized controller. Each ASISP is capable of executing a subset of the set of functions included in the communication protocol. The scheduler or centralized controller is connected to the plurality of ASISPs for scheduling the plurality of ASISPs in accordance with a scheduling scheme or time-slicing algorithm so that each process in the plurality of processes is supported by the wireless communication system.

Liu is directed to a completely different system from the present invention. That is, Liu is directed to an XDSL system, which refers collectively to all types of digital subscriber lines. DSL technologies use sophisticated modulation schemes to pack data onto copper wires, and thus is a wireline system. Wireless and wireline systems have very different architectures, and features of one system are not applicable to the other. Liu is therefore not applicable to the claims of the present invention.

Because Liu is directed to a completely different system from the present invention, there are many claimed features not taught or suggested by Liu. For example, Liu does not suggest a plurality of processes executed in accordance with a wireless communication protocol, as required by the claims. A wireless communication protocol is a set of rules governing the format of wireless communications between a mobile phone and a base station. Examples of wireless communication protocols include TDMA (time division multiple access) and CDMA (code division multiple access). Liu does not in any way relate to such protocols. Again, Liu discusses XDSL systems, which are landline rather than wireless system.

Liu also does not teach or suggest a plurality of application specific instruction set processors (ASISPs), as also required by the claimed invention. An ASISP is a specific type of device that is different from a dedicated hardware architecture and different from a software architecture (programmable CPU based). An ASISP takes the best features of both of these architectures and combines them into a single architecture. The hardware blocks (e.g., Rx Scrambler and CRC 154, Tx Scrambler and CRC 155, RS Decoder 156, RS Encoder 157, QAM Decoder 158, Tone Shuffler 159, QAM Decoder 160, etc.) in Liu to which the Examiner refers are basic blocks in a DSL system; they are clearly not the very specific type of processor known as ASISPs.

Further, Liu does not teach or suggest a scheduler that schedules the ASISPs in accordance with a time slicing algorithm, as also required by the claimed invention. Time slicing means that the scheduler interrupts each process after some small period of time (e.g., milliseconds) and gives control to another process. On the other hand, Liu teaches pipelining, which is a technique where a microprocessor begins executing a second instruction before the first has been completed. That is, several instructions are in the pipeline simultaneously, each at a different processing stage. The pipeline is divided into segments and each segment can execute its operation concurrently with the other segments. When a segment completes an operation, it passes the result to the next segment in the pipeline and fetches the next operation from the preceding segment. The final results of each instruction emerge at the end of the pipeline in rapid succession. This pipelining process is clearly different from the claimed time slicing algorithm.

The Examiner cites Cheng for its alleged teaching of a wireless communication system having a plurality of processors. While Cheng may simply mention "wireless connections" (see col. 3, line 14) it does not make up for the deficiencies of Liu as discussed above.

Thus, the claims are patentable over the applied references for at least these reasons.


Dependent claims 13-16, 42 and 43 further recite various wireless protocols such as CDMA, IS-95 CDMA, IS-95B CDMA, CDMA TIA IS2000, TIA IS 2000A, wideband CDMA (WCDMA), cdma2000, and ARIB WCDMA, TDMA, and IS-136 TDMA. Since Liu does not suggest a wireless system, it cannot such the specific wireless protocols as recited. Cheng merely mentions "wireless connections," and thus again does not make up for Liu's deficiencies. Claims 13-16, 42 and 43 are therefore patentable over the applied references for this additional reason.

Dependent claims 19, 20, 44, and 45 recite an "echo." As explained in paragraph 52 of the published application, "The term echo is also used to refer to a multipath. Echoes are caused when the signal emitted from a transmitter 'bounces' off an object and arrives at the receiver through an alternate, delayed path." Echo is a concept associated with wireless, and not wireline, communication systems. Thus, claims 19, 20, 44, and 45 are patentable over the applied references for this additional reason.

In view of the above, Applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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